

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P04-113	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2004/014781	International filing date (day/month/year) 30.09.2004	Priority date (day/month/year) 10.10.2003
International Patent Classification (IPC) or national classification and IPC C07C257/02, C07D257/04		
Applicant TOYO KASEI KOGYO COMPANY LIMITED		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input checked="" type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

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Box No. 1

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. IV

Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:

The feature that is common to both the inventions set forth in claims 1 to 3 and the inventions set forth in claims 4 to 8 is the compound represented by general formula (2). However, compounds represented by general formula (2) are disclosed in the document JP 2003-321431 A ((Fuji Photo Film Co., Ltd.), 11 November 2003), and thus the compounds in question are not novel. Furthermore, the inventions set forth in claims 1 to 3 of the present application are not disclosed in the earliest application that serves as the basis for claiming the rights of priority (filing date: 10 October 2003), and thus the compounds that are represented by general formula (2) are not novel for the reason indicated above.

[Refer to the Supplemental Box]

4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. _____

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	1-8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 46-10526 B1 (Toyo Jozo Co., Ltd.), 17 March 1971</p> <p>Document 2: JP 9-309883 A (Kabushiki Kaisha Toyo Kasei), 02 December 1997 & EP 796852 A1</p> <p>(Documents 1 and 2 are cited in the international search report.)</p> <p>Document 1 (column 4, line 37 to column 5, line 6) indicates that imidoyl chlorides can be obtained by subjecting a carboxylic acid amide to the action of a chlorification agent such as POCl₃, and further indicates that it is preferable to obtain imidoyl chlorides by means of a method wherein a carboxylic acid amide is subjected to the action of COCl₂ in the presence of a tertiary amine. However, document 1 does not disclose or suggest a method wherein a carboxylic acid amide is subjected to the action of POCl₃ in the presence of a tertiary amine, like in the inventions that are set forth in claims 1 to 3 of the present application.</p> <p>Such being the case, claims 1 to 3 are novel and involve an inventive step.</p>			

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Document 2 (claims and paragraphs [0003] to [0010]) discloses a method for the production of tetrazoles by reacting a nitrile and an inorganic azide salt in the presence of an amine salt, said production method being characterized in that the reaction in question is carried out within an aromatic hydrocarbon solvent in order to resolve the problems that are associated with purification by means of prior art DMF solvents. However, document 2 does not indicate or suggest that it would be possible to employ the method in question when reacting an imidoyl chloride and an azide compound, like in the inventions that are set forth in claims 4 to 8 of the present application.

Such being the case, claims 4 to 8 are novel and involve an inventive step.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box IV.3

Such being the case, the only feature that is common to the abovementioned two groups of inventions is not a special technical feature; consequently, these two groups of inventions are not linked so as to form a single general inventive concept.